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TO THE ASSISTANT COMMISSIONER FOR PATENTS:

Transmitted herewith is the patent application of () application identifier or (X) first named inventor, Alexandra Nsonwu, entitled POP-UP Option Palette, for a(n):

(X) Original Patent Application.

() Continuing Application (prior application not abandoned):

() Continuation () Divisional () Continuation-in-part (CIP)
of prior Application No. _____, filed on _____.

() A statement claiming priority under 35 USC § 120 has been added to the specification.

Enclosed are:

(X) Specification; 29 Total Pages. (X) Drawing(s); 12 Total Sheets.

(X) Oath or Declaration.

(X) A Newly Executed Combined Declaration and Power of Attorney:

() Signed. (X) Unsigned. () Partially Signed.

() A Copy from a Prior Application for Continuation/Divisional (37 CFR § 1.63(d)).

() Incorporation by Reference. The entire disclosure of the prior application, from which a copy of the oath or declaration is supplied, is considered as being part of the disclosure of the accompanying application and is hereby incorporated herein by reference.

() Signed Statement Deleting Inventor(s) Named in the Prior Application. (37 CFR § 1.63(d)(2)).

() Power of Attorney.

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() Preliminary Amendment.

(X) Information Disclosure Statement and Form PTO-1449

() A Certified Copy of Priority Documents (if foreign priority is claimed).

() Statement(s) of Status as a Small Entity.

() Statement(s) of Status as a Small Entity Filed in Prior Application, Status Still Proper and Desired.

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Respectfully submitted,

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7 **POP-UP OPTION PALETTE**
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11 **FIELD OF THE INVENTION**

12 This invention relates generally to the field of control of electronic equipment.
13 More particularly, this invention relates to a pop-up option palette used to control
14 options in a video display system, preferably including a set-top box.
15

16
17 **BACKGROUND OF THE INVENTION**

18 With the proliferation of television set-top boxes used to navigate through a
19 myriad of cable television channels, satellite television channels and the Internet,
20 there has been a similar proliferation of electronic program guides and control
21 metaphors used to facilitate the user's navigation through television channels, web
22 sites and set-top box (STB) or video system functions. When considered in
23 conjunction with a conventional television set (or even a high definition television
24 set), the system designer is faced with a delicate balance between providing too
25 much information and cluttering the screen so as to make information difficult to
26 find, and providing the user with easy access to required functions.

27 Toolbars and menu bars are often used in computer programs and electronic
28 program guides to simplify the process of browsing through television channels and
29 web sites and controlling the operation of the STB. However, such toolbars and

1 menu bars occupy valuable screen space. This can be particularly troublesome on
2 conventional NTSC or PAL televisions where resolution of the displayed image
3 limits the amount of information that can be displayed on the screen. If such
4 toolbars and menu bars are not provided, the user is often left with the need to
5 memorize key codes, wade through numerous menus, or backtrack in order to
6 browse a previously browsed area, jump to a different area of the system or control
7 the STB or video system.
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10 SUMMARY OF THE INVENTION

11 It would therefore be advantageous to provide a shortcut method for
12 navigating through the features of a set-top box, electronic program guide and
13 otherwise control operation of the electronics without the need for toolbars, menu
14 bars and memorized key codes.

15 The present invention relates generally to a pop-up option palette used in
16 conjunction with an STB to control various functions of operation of the STB and
17 associated systems. Objects, advantages and features of the invention will
18 become apparent to those skilled in the art upon consideration of the following
19 detailed description of the invention.

20 In one embodiment of the present invention, a pop-up option palette is
21 implemented as an overlay window enabled by HTML. The pop-up option palette
22 appears anywhere on the system at the touch of a particular key on the remote
23 control and disappears at the touch of the same key in the preferred embodiment.
24 The pop-up option palette provides shortcut methods for jumping to other areas of
25 the system, eliminating the need for actual toolbars or menus. When the pop-up
26 key is activated, a window providing a palette of options appears overlaying the
27 browser's main window. The content of the window can be determined based on
28 the page being displayed so that appropriate information relevant to the page being
29 displayed appears within the pop-up option palette window. Thus, the options

1 available on the pop-up option palette are context sensitive. Additionally, help
2 available through the help button is also context sensitive.

3 A method consistent with the present invention of providing user options in
4 operation of a video system, includes: displaying an image on a display screen, the
5 image being associated with a current one of a plurality of operational contexts;
6 detecting actuation of a pop-up option palette control; and upon detecting actuation
7 of the pop-up option palette control, overlaying the image on the display screen with
8 a pop-up option palette displaying a plurality of selectable user options, the options
9 having functions associated with the current operational context.

10 A storage media storing instructions which, when executed on a
11 programmed processor, carry out a process consistent with the invention of:
12 displaying an image on a display screen, the image being associated with a current
13 one of a plurality of operational contexts; detecting actuation of a pop-up option
14 palette control; and upon detecting actuation of the pop-up option palette control,
15 overlaying the image on the display screen with a pop-up option palette displaying
16 a plurality of selectable user options, the options having functions associated with
17 the current operational context.

18 A set-top box, consistent with the present invention, includes a programmed
19 processor. A memory device stores an operating system, a browser program and
20 a pop-up option palette program to operate on the programmed processor. An
21 image is displayed on a video display, the image being associated with one of a
22 plurality of operational contexts. A mechanism is provided for receiving user
23 commands. The pop-up option palette program operates to carry out the process
24 of: detecting receipt of a pop-up option palette command; and upon detecting
25 receipt of the pop-up option palette command, overlaying the image on the display
26 screen with a pop-up option palette displaying a plurality of selectable user options,
27 the options having functions associated with the current operational context.

28 Preferably, the process further includes detecting a subsequent receipt of
29 the pop-up option palette command; and upon detecting the subsequent receipt of

1 the pop-up option palette command, removing the overlaying image from the
2 display screen.

3 The above summaries are intended to illustrate exemplary embodiments of
4 the invention, which will be best understood in conjunction with the detailed
5 description to follow, and are not intended to limit the scope of the appended
6 claims.

9 BRIEF DESCRIPTION OF THE DRAWINGS

10 The features of the invention believed to be novel are set forth with
11 particularity in the appended claims. The invention itself however, both as to
12 organization and method of operation, together with objects and advantages
13 thereof, may be best understood by reference to the following detailed description
14 of the invention, which describes certain exemplary embodiments of the invention,
15 taken in conjunction with the accompanying drawings in which:

16 **FIGURE 1** is a block diagram of a set top box shown in conjunction with a
17 cable system consistent with an embodiment of the present invention.

18 **FIGURE 2** illustrates a screen image for a home location according to an
19 embodiment of the present invention.

20 **FIGURE 3** illustrates a TV options palette screen image overlaying the
21 electronic program guide in an embodiment of the present invention.

22 **FIGURE 4** illustrates an Email options screen image overlaying the Email
23 screen in embodiment of present invention.

24 **FIGURE 5** illustrates an events option palette screen image overlaying an
25 events screen according to an embodiment of the present invention.

26 **FIGURE 6** illustrates a movie options palette screen image overlaying a
27 movie screen according to an embodiment of the present invention.

28 **FIGURE 7** illustrates an online options screen image overlaying an online
29 browsing screen according to an embodiment of the present invention.

1 **FIGURE 8** illustrates a settings and tips options screen image according to
2 an embodiment of the present invention.

3 **FIGURE 9** illustrates a favorites options screen image according to an
4 embodiment of the present invention.

5 **FIGURE 10**, which is made up of **FIGURE 10A, 10B** and **10C**, is a flow chart
6 describing the operation of the pop-up option palette consistent with embodiments
7 of the present invention.
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10 **DETAILED DESCRIPTION OF THE INVENTION**

11 While this invention is susceptible of embodiment in many different forms,
12 there is shown in the drawings and will herein be described in detail specific
13 embodiments, with the understanding that the present disclosure is to be
14 considered as an example of the principles of the invention and not intended to limit
15 the invention to the specific embodiments shown and described. In the description
16 below, like reference numerals are used to describe the same, similar or
17 corresponding parts in the several views of the drawings.

18 In the following description, numerous details are set forth in order to provide
19 a thorough understanding of the present invention. However, it will be apparent to
20 one of ordinary skill in the art that these specific details are not required in order to
21 practice the present invention. In addition, well known electrical structures and
22 circuits are shown in block diagram form and not described in detail in order so as
23 to not unnecessarily obscure the present invention. Additionally, although the
24 present invention is described in connection with an interactive cable system, it is
25 understood that this invention is applicable to other systems wherein set-top boxes
26 and/or electronic programming guides (EPGs) are used.

27 Referring to **FIGURE 1**, a block diagram for an exemplary interactive cable
28 television (TV) system 100 is shown. The system 100 includes a media server 12
29 for providing, on demand, movies and other programming obtained from a media

1 database 14. The media server 12 also provides additional content such as
2 interviews with the actors, games, advertisements, available merchandise,
3 associated Web pages, interactive games and other related content. The system
4 100 also includes an electronic programming guide (EPG) server 16 and a program
5 listing database 18 for generating an EPG as will be described.

6 The media 12 and EPG 16 servers are coupled by a transmission medium
7 20 to a set top box (STB) 22. The transmission medium 20 may include a
8 conventional coaxial cable network, a fiber optic cable network, telephone system,
9 a satellite communication system, a radio frequency (RF) system, a microwave
10 system, other wireless systems, a combination of wired and wireless systems or
11 any of a variety of known electronic transmission mediums.

12 The system 100 further includes a TV 24, such as a digital television, having
13 a display 26 for displaying an EPG, programming, web content and other display
14 functions. The STB 22 may be coupled to the TV 24 and various other audio/visual
15 devices 26 and Internet Appliances 28 by an appropriate interface 30. In one
16 embodiment, interface 30 conforms to an interface standard such as the Institute
17 of Electrical and Electronics Engineers (IEEE) 1394 standard. The STB 22 may
18 include a central processing unit (CPU) 32 and memory 33 such as Random
19 Access Memory (RAM), Read Only Memory (ROM), flash memory, mass storage
20 such as a hard disc drive, or other electronic storage media, etc. Such memory
21 and storage media is suitable for storing data as well as programmed processes
22 for execution on the CPU 32. STB 22 may include circuitry suitable for audio
23 decoding and processing, the decoding of video data compressed in accordance
24 with a compression standard such as the Motion Pictures Experts Group (MPEG)
25 standard and other processing to form a controller or central hub. Alternatively,
26 components of the STB 22 may be incorporated into the TV 24 itself, thus
27 eliminating the STB 22. Further, a computer having a tuner device may be
28 substituted for the TV 24 and STB 22. Such variations are considered equivalent.

29 By way of example, the STB 22 may be coupled to devices such as a
30 personal computer, video cassette recorder, camcorder, digital camera, personal

1 digital assistant and other audio/visual or Internet related devices. In addition, a
2 data transport architecture, such as that set forth by an industry group which
3 includes Sony Corporation and known as the Home Audio-Video Interoperability
4 (HAVi) architecture may be utilized to enable interoperability among devices on a
5 network regardless of the manufacturer of the device. This forms a home network
6 system wherein electronic devices and Internet appliances are compatible with
7 each other. Further, the STB 22 runs an operating system 46 suitable for a home
8 network system such as Aperios™ which was developed by Sony Corporation.

9 The STB 22 includes an infrared (IR) receiver 34 for receiving IR signals from
10 an input device such as remote control 36. Alternatively, it is noted that many other
11 communication methods may be utilized, such as wired or wireless control, radio
12 frequency, etc. In addition, it can be readily appreciated that the input device 36
13 may be any device suitable for controlling the STB 22 such as a remote control,
14 personal digital assistant, laptop computer, keyboard or computer mouse. In
15 addition, the input device 36 may be a control panel located on the TV 24 or the
16 STB 22. The user manipulates various controls of remote control 36 in order to
17 operate audio visual devices 26, Internet appliances 28 and television 24 remotely.
18 The remote control 36 may include arrow keys, a joystick like pad, a jog shuttle or
19 similar or pointing control in order to navigate through the browser 52 and the pop-
20 up option palette 56.

21 The STB 22 may also be coupled to an independent service provider (ISP)
22 host 38 by a network 40 such as the Internet. The ISP host 38 provides various
23 content to the user that is obtained from a content database 42. STB 22 may also
24 be used as an Internet access device to obtain information and content from the
25 Internet.

26 As previously stated, memory 33 of set top box 22 includes an operating
27 system 46 such as the Sony Aperios™ operating system. In addition, browser
28 software 52 resides in memory 33 to facilitate browsing through Web pages on the
29 Internet as well as browsing through television programming and other types of
30 content available through set-top box 22. Video images, such as TV images may

1 be generated as HTML live video in a video window within the browser 52. A pop-
2 up option palette program 56, consistent with the present invention, also resides
3 in memory 33 and is activated upon the user pressing pop-up option palette
4 activation key on remote control 36. This serves to toggle the pop-up option palette
5 on and off.

6 The pop-up option palette of the present invention is implemented as an
7 overlay window enabled by HTML. The pop-up option palette appears anywhere
8 on the system at the touch of the particular pop-up option palette key on the remote
9 control 36 and disappears at the touch of the same key in the preferred
10 embodiment. The pop-up option palette provides shortcut methods for jumping to
11 other areas of the system, eliminating the need for actual toolbars or menus.
12 When the pop-up key is activated, a window providing a palette of options appears
13 overlaying the browser's main window. The size, content and placement of this
14 menu can be predetermined by the user or by the system designer. The content
15 of the window can be determined based on the page being displayed so that
16 appropriate information relevant to the page being displayed appears within the
17 pop-up option palette window. Thus, the options available on the pop-up option
18 palette are context sensitive. Additionally, help available through the help button
19 is also context sensitive. These and other features of the invention will become
20 clear upon consideration of the following discussion.

21 Referring now to **FIGURE 2** a home screen 200 is illustrated. This screen
22 may represent the default screen that appears on activation of the television
23 equipment. The active programming (e.g. last tuned or default television channel)
24 appears in a window 208 shown near the upper right-hand corner of screen 200.
25 A plurality of locations can be navigated by selecting menu options located in the
26 upper left of the screen. Using these menu selections the user can move to
27 different pages representing different functions of the set-top box. Selecting cell
28 212 takes the user to the electronic program guide. Selecting cell 216 takes the
29 user to a screen controlling prerecorded movies, for example, to be played on a
30 video cassette recorder or digital videodisc player or to a video on demand system.

1 Selecting cell 222 takes the user to a special events screen such as pay per view.
2 Selecting cell 228 takes the user to online services. Selecting cell 234 takes the
3 user to electronic mail. An icon such as an envelope icon 230 can be used in the
4 E-mail cell 234 to represent the presence of unopened electronic mail.

5 When the user strikes the predetermined key on remote control 36, the pop-
6 up option palette 240 according to the present invention overlays the active window.
7 In the home screen 200, the pop-up option palette of the present invention knows
8 from the system's operational context of the home screen to overlay the screen with
9 a TV options palette 240. The user can quickly implement various functions suited
10 to the context of the home screen 200 by selecting any of the various tabs of the TV
11 options palette. The current page can be printed by selecting print tab 244. The
12 current location can be added to a list of favorites by selecting the add to favorites
13 tab 250. Context sensitive help can be obtained by selecting the help tab 256. The
14 user can navigate to the previous location by selecting the back tab 260. A shortcut
15 to various services can be obtained by selecting the shortcut to services tab 266.

16 Referring now to **FIGURE 3**, a screen 300 representing an electronic
17 program guide 304 also shows the TV options pop-up option palette 240 overlaid
18 thereon. In the embodiment shown, the Yahoo™ TV coverage screen available on
19 the Internet is detected. This should not be considered limiting however since any
20 suitable program guide is appropriate. The function of the print tab 244, the add to
21 favorites tab 256 and the shortcut to services tab 266 are identical to those
22 functions as described in conjunction with **FIGURE 2**. The back tab 260 similarly
23 takes the user to the previous screen. In **FIGURE 2**, the back tab is illustrated as
24 highlighted by the user, whereas in **FIGURE 3** the back tab 260 is not highlighted.
25 Although the function of option palette 240 is essentially identical to that of option
26 palette 240 of **FIGURE 2**, the selection of TV options in association with program
27 guide 304 determines that the help tab 320 provides help which is context sensitive
28 to the programming guide 304 rather than being context sensitive to the home
29 location as in **FIGURE 2** if there are any differences in the two help systems.

1 Referring now to **FIGURE 4**, the TV options palette 240 is illustrated
2 overlaying an Email screen 400. With reference to operation of the Email screen
3 400, Email control cell 404 provides access to common family Email. Cell 408,
4 410 and 414 lead the user to individual Email accounts. Icon 230 indicates that cell
5 414 contains unopened Email to a user named George. Again, active video is
6 shown in window 208 and the TV options palette control tabs have functions
7 somewhere to those previously described. The help tab 420 however, takes the
8 user to a context sensitive help function suitable for the Email context. The back
9 tab 260, illustrated as selected, takes the user back to the previously selected
10 location.

11 Referring now to **FIGURE 5**, an event options palette 504 is overlaying an
12 events screen to produce screen image 500. Again, active video appears in
13 window 208 while control cells for the events screen appear on the left topside of
14 the screen. In this case the user can select top event picks 510 to access top
15 selections, categories 514 for a categorized listing of events or an alphabetical
16 listing of the events A-Z 520. Other suitable controls for an events screen could
17 also be implemented without departing from the present invention. The events
18 option palette 504 includes controls 244 for printing, 256 for adding to favorites, 260
19 for returning to a previous screen and 266 to access a shortcut to services as in
20 previous option palettes. The help tab 530 provides context sensitive help based
21 upon the events option.

22 Referring now to **FIGURE 6**, a movie options palette 604 is overlaying a
23 movie screen to produce screen image 600. Again, active video appears in
24 window 208 while control cells for the movie screen appear on the left topside of
25 the screen. In this case the user can select top movie picks 610 to access top
26 movie selections, categories 614 for a categorized listing of movies or an
27 alphabetical listing of the movies A-Z 620. Other suitable controls for a movie
28 screen could also be implemented without departing from the present invention.
29 The movies option palette 604 includes controls 244 for printing, 256 for adding to

1 favorites, 264 returning to a previous screen and 266 to access a shortcut to
2 services as in previous option palettes. The help tab 630 provides context sensitive
3 help based upon the movies option.

4 In addition to the control tabs described above, the movies option palette 604
5 is utilized to control the operation of a video cassette recorder, DVD player or other
6 source of movies. Accordingly, the movie options palette 604 is provided with
7 conventional playback control tabs suitable for use with such devices. These
8 playback control tabs include, in the present embodiment, a play tab 640 to begin
9 playing a selected movie, a rewind tab 644 to rapidly moved backwards in the
10 selection, a stop tab 648 to stop the playback process and a forward tab 652 to
11 move rapidly forward in the selection. Stop tab 648 can also be used to stop the
12 action initiated by rewind tab 644 or forward tab 652. Other movie control features
13 could also be implemented in the movie options palette 604 without departing from
14 the present invention.

15 Referring now to **FIGURE 7**, an online options palette 704 is overlaying an
16 online screen to produce screen image 700. Again, active video appears in window
17 208 while control cells for the online screen appear on the left topside of the
18 screen. In this case the user can select top online picks 710 to access top web
19 sites, categories 714 for a categorized listing of web sites or an alphabetical listing
20 of the web sites A-Z 620. Other suitable controls for an online screen could also
21 be implemented without departing from the present invention. The online option
22 palette 704 includes controls 244 for printing, 256 for adding to favorites, 264
23 returning to a previous screen and 266 to access a shortcut to services as in
24 previous option palettes. The help tab 730 provides context sensitive help based
25 upon the movies option.

26 In addition to the control tabs described above, the online option palette 604
27 is utilized to add control to the web browsing function. Accordingly, the online
28 options palette 704 is provided with a control tab 740 to toggle the TV image on and
29 off in the active display portion 208. A stop tab 744 is provided to halt downloading
30 of a page or other content. A keyword search can be initiated by selection of

1 keyword search tab 750. Of course, other online control features could also be
2 implemented in the online options palette 704 without departing from the present
3 invention.

4 Referring now to **FIGURE 8**, a Settings & Tips options palette 804 is
5 overlaying an online screen to produce screen image 800. Again, active video
6 appears in window 208 while control cells for the Settings & Tips screen appear on
7 the left topside of the screen. In this case the user can select customer service cell
8 810 to access the service provider's customer service department, device setup
9 814 for controls in setting up the STB 22, user preferences setup or modification
10 at 816, locks and limits settings for parental control and the like at 818 and tips for
11 using the system at 820. Other suitable controls for a Settings & Tips screen could
12 also be implemented without departing from the present invention.

13 The Settings & Tips palette 804 includes controls 244 for printing, 260 for
14 returning to a previous screen and 266 to access a shortcut to services as in
15 previous option palettes. The help tab 830 provides context sensitive help based
16 upon the Settings & Tips option.

17 Referring now to **FIGURE 9**, a screen image 900 representing a favorites
18 screen is illustrated. A favorites option palette 904 overlays the favorites screen.
19 In this instance, the favorites screen shows events in a particular area with
20 promotional information appearing in the area 908. The user can select cell 912
21 in order to move back to the main menu associated with this selected users
22 favorites. The user can select cell 916 to obtain more detailed information and
23 other options related to the current favorites screen being displayed. The area 920
24 illustrates a listing of selected favorites associated with the current user. The
25 favorites option palette 904 provides tabs associated with control of the users
26 favorites profile. Tab 910, shown highlighted, permits the users to select among
27 various favorites groups. Tab 916 allows the user to scroll to the next favorites
28 while tab 918 allows the user to scroll to the previous favorite. A channel can be
29 added to the current favorites by using tab 924 and the favorites can be changed

1 using tab 928. Other suitable controls for controlling a favorites option palette could
2 also be implemented without departing from the present invention.

3 A process 950 for implementing the pop-up option palette consistent with
4 the above description is illustrated in **FIGURE 10**, which is made up of **FIGURE**
5 **10A**, **FIGURE 10B** and **FIGURE 10C**. The process begins at 1000 at the system
6 startup. This occurs whenever the user activates the set-top box by pressing a
7 suitable key on remote control 36. Upon startup of the system, the home screen
8 is selected by default. That is, the context is set to home at 1004. In the home
9 context, the TV option palette is turned on if the user activates the pop-up option
10 palette key of remote control 36. When the TV option palette is activated, the user
11 has the option of going back at 1006, taking a shortcut to services at 1008, printing
12 to the default printer at 1012, adding a channel to the favorites list at 1016 or
13 obtaining help at 1018 in a context sensitive help system suitable for the home
14 screen. If the user activates the pop-up key at 1020 the option palette is turned off
15 at 1024. Otherwise, the pop-up option palette remains turned on. Once the pop-up
16 options palette is turned off at 1024, when the pop up key is actuated again at 1028
17 the system first determines the current context at 1032. In the embodiment shown,
18 the context can be home, TV, E-mail, events, settings & tips, movies, online,
19 favorites and shortcut to services.

20 At 1036, the system opens the appropriate option palette for the current
21 operational context. If the context is home at 1040, the system opens a the TV
22 option palette. If the context is TV or program guide at 1042 the system opens a
23 slightly modified TV option palette. If the context is Email, the system opens a
24 slightly modified TV option palette at 1046. If the context is events, the system
25 opens the events option palette at 1048. If the context is settings & tips at 1052 the
26 system opens the settings and tips option palette. If the context is movies at 1056,
27 the system opens the movies option palette. If the context is online at 1058, the
28 system opens the online option palette. If the context is shortcut to services, the

1 system opens the services option palette at 1060. If the context is favorites at
2 1062, the system opens the favorites option palette at 1062.

3 In the case of the home context at 1040, all of the options available in the
4 home context 1004 are available. In the case of the context of TV context or
5 program guide context at 1042, all of the home option palette selections are
6 similarly available except to that the help selection 1018A is substituted for the
7 home help and is TV context sensitive. In the case of the Email context at 1046,
8 all of the home option palette selections are similarly available except that the
9 Email help 1018B is substituted and is Email context sensitive.

10 In the case of the events context at 1048, shortcut to services 1008 is
11 available, printing to the default printer at 1012 is available, as well as the back
12 function 1006. The help option 1064 is context sensitive to events.

13 In the case of the settings & tips context at 1052, the shortcut to services at
14 1008, the printing to the default printer at 1012 and back function at 1006 are all
15 available. Help is available at 1066 context specific to the settings & tips context.

16 In the case of the movies context at 1056, the shortcut to services option is
17 available at 1008. Printing to the default printer is available at 1012. The back
18 function is available at 1006 and the help function is available at 1068 in the movies
19 context. In addition to these functions, play function 1070, rewind function 1072,
20 stop function 1074 and forward function 1076 are available.

21 In the case of the online context at 1058, the shortcut to services at 1008 and
22 access to the default printer at 1012 are available. Help is available at 1080 in the
23 context of online. In addition, the back function at 1006 is available. Online related
24 functions of adding to favorites at 1082, keyword searching at 1084 and stopping
25 a download at 1086 are available. The TV window can be toggled at 1088.

26 In the context of shortcut to services at 1060, the user can navigate to the
27 home context at 1089, to the favorites context at 1090, to the guide context at
28 1091, to the online context at 1092, to the movies context at 1093, to the Email
29 context at 1094, to the events context at 1095, to the settings and tips context at
30 1096 or may return back to the previous options context at 1097.

1 In the context of favorites at 1062, the user can choose a favorites group at
2 1100, go to a next favorite at 1110 or to a previous favorite at 1120. The user can
3 add a channel to the favorites at 1130 or change favorites at 1140.

4 In each of the above context's, whenever the option palette is on, the system
5 continuously monitors for receipt of an indication of actuation of the pop up key at
6 1020. In the event the pop-up key is actuated, the option palette is closed. Another
7 actuation of the pop-up key at 1028 reopens the appropriate option palette as
8 determined by the context at 1032. Whenever a selection is made from any of the
9 context's on any of the option palette's, upon completing a task associated with the
10 selection, control returns to the option palette which is active.

11 Those skilled in the art will recognize that the present invention has been
12 described in terms of exemplary embodiments based upon use of a programmed
13 processor. However, the invention should not be so limited, since the present
14 invention could be implemented using hardware component equivalents such as
15 special purpose hardware and/or dedicated processors which are equivalents to
16 the invention as described and claimed. Similarly, general purpose computers,
17 microprocessor based computers, micro-controllers, optical computers, analog
18 computers, dedicated processors and/or dedicated hard wired logic may be used
19 to construct alternative equivalent embodiments of the present invention.

20 Those skilled in the art will appreciate that the program steps used to
21 implement the embodiments described above can be implemented using disc
22 storage as well as other forms of storage including Read Only Memory (ROM)
23 devices, Random Access Memory (RAM) devices; optical storage elements,
24 magnetic storage elements, magneto-optical storage elements, flash memory, core
25 memory and/or other equivalent storage technologies without departing from the
26 present invention. Such alternative storage devices should be considered
27 equivalents.

28 The present invention is preferably implemented using a programmed
29 processor executing programming instructions that are broadly described above in
30 flow chart form. However, those skilled in the art will appreciate that the processes

described above can be implemented in any number of variations and in many suitable programming languages without departing from the present invention. For example, the order of certain operations carried out can often be varied, and additional operations can be added without departing from the invention. Error trapping can be added and/or enhanced and variations can be made in user interface and information presentation without departing from the present invention. Such variations are contemplated and considered equivalent.

While the invention has been described in conjunction with specific embodiments, it is evident that many alternatives, modifications, permutations and variations will become apparent to those skilled in the art in light of the foregoing description. Accordingly, it is intended that the present invention embrace all such alternatives, modifications and variations as fall within the scope of the appended claims.

What is claimed is:

1 1. A method of providing user options in operation of a video system,
2 comprising:

3 displaying an image on a display screen, the image being associated with
4 a current one of a plurality of operational contexts;

5 detecting actuation of a pop-up option palette control; and

6 upon detecting actuation of the pop-up option palette control, overlaying the
7 image on the display screen with a pop-up option palette displaying a plurality of
8 selectable user options, the options having functions associated with the current
9 operational context.

10
11 2. The method according to claim 1, wherein the current operational context is
12 selected from the plurality of operational contexts comprising at least two of the
13 following: a home context, a TV context, an Email context, an events context, a
14 settings & tips context, a movies context, an online context, a shortcut to services
15 context, a program guide context and a favorites context.

16
17 3. The method according to claim 1, wherein one of the user selectable options
18 has a function of providing help for the current operational context.

1 4. The method according to claim 1, wherein the current operational context
2 comprises one of a home context, a program guide context, a TV context, an Email
3 context; and wherein the user selectable options provide at least the functions of
4 adding a current channel to a favorites list, printing to a printer, and providing a
5 shortcut to services.

6
7 5. The method according to claim 1, wherein the current operational context
8 comprises one of a settings & tips context and an events context; and wherein the
9 user selectable options provide at least the functions of providing a shortcut to
10 services and printing to a printer.

11
12 6. The method according to claim 1, wherein the current operational context
13 comprises a movies context; and wherein the user selectable options provide at
14 least the functions of playing a movie, rewinding a movie, forwarding a movie and
15 stopping the functions of playing, rewinding and forwarding.

16
17 7. The method according to claim 1, wherein the current operational context
18 comprises an online context; and wherein the user selectable options provide at
19 least the functions of adding a page to a favorites list and initiating a keyword
20 search.

1 8. The method according to claim 1, wherein the current operational context
2 comprises a shortcut to services context; and wherein the user selectable options
3 provide at least the function of shifting to another available operational context.
4

5 9. The method according to claim 1, wherein the current operational context
6 comprises a shortcut to services context; and wherein the user selectable options
7 provide at least the function of shifting to another available operational context.
8

9 10. The method according to claim 1, wherein the current operational context
10 comprises a settings & tips context; and wherein the user selectable options
11 provide at least the function of showing the user operational tips.
12

13 11. The method according to claim 1, wherein the current operational context
14 comprises a settings & tips context; and wherein the user selectable options
15 provide at least the function of permitting the user to change operational settings.
16

17 12. The method according to claim 1, wherein the current operational context
18 comprises a favorites context; and wherein the user selectable options provide at
19 least the functions of choosing a group of favorites, moving to a previous favorites
20 group, moving to a next favorites group, changing favorites and adding a channel
21 to a favorites group.
22

1 14. A storage media storing instructions which, when executed on a
2 programmed processor, carry out the steps of:

3 displaying an image on a display screen, the image being associated with
4 a current one of a plurality of operational contexts;

5 detecting actuation of a pop-up option palette control; and

6 upon detecting actuation of the pop-up option palette control, overlaying the
7 image on the display screen with a pop-up option palette displaying a plurality of
8 selectable user options, the options having functions associated with the current
9 operational context.

10
11 15. The storage media according to claim 14, wherein the current operational
12 context is selected from the plurality of operational contexts comprising at least two
13 of the following: a home context, a TV context, an Email context, an events context,
14 a settings & tips context, a movies context, an online context, a shortcut to services
15 context, a program guide context and a favorites context.

16
17 16. The storage media according to claim 14, further comprising: detecting a
18 subsequent actuation of the pop-up option palette control; and upon detecting the
19 subsequent actuation of the pop-up option palette control, removing the overlaying
20 image from the display screen.

1 17. A set-top box, comprising:
2 a programmed processor;
3 a memory device storing an operating system, a browser program and a
4 pop-up option palette program to operate on the programmed processor;
5 means for displaying an image on a video display, the image being
6 associated with one of a plurality of operational contexts;
7 means for receiving user commands;
8 and wherein the pop-up option palette program operates to carry out the
9 process of:
10 detecting receipt of a pop-up option palette command; and
11 upon detecting receipt of the pop-up option palette command, overlaying the
12 image on the display screen with a pop-up option palette displaying a plurality of
13 selectable user options, the options having functions associated with the current
14 operational context.

15
16 18. The set-top box according to claim 17, wherein the current operational
17 context is selected from the plurality of operational contexts comprising at least two
18 of the following: a home context, a TV context, an Email context, an events context,
19 a settings & tips context, a movies context, an online context, a shortcut to services
20 context, a program guide context and a favorites context.

1 19. The set-top box according to claim 17, wherein one of the user selectable
2 options has a function of providing help for the current operational context.

3
4 20. The set-top box according to claim 17, wherein the current operational
5 context comprises one of a home context, a program guide context, a TV context,
6 an Email context; and wherein the user selectable options provide at least the
7 functions of adding a current channel to a favorites list, printing to a printer, and
8 providing a shortcut to services.

9
10 21. The set-top box according to claim 17, wherein the current operational
11 context comprises one of a settings & tips context and an events context; and
12 wherein the user selectable options provide at least the functions of providing a
13 shortcut to services and printing to a printer.

14
15 22. The set-top box according to claim 17, wherein the current operational
16 context comprises a movies context; and wherein the user selectable options
17 provide at least the functions of playing a movie, rewinding a movie, forwarding a
18 movie and stopping the functions of playing, rewinding and forwarding.

1 23. The set-top box according to claim 17, wherein the current operational
2 context comprises an online context; and wherein the user selectable options
3 provide at least the functions of adding a page to a favorites list and initiating a
4 keyword search.

5
6 24. The set-top box according to claim 17, wherein the current operational
7 context comprises a shortcut to services context; and wherein the user selectable
8 options provide at least the function of shifting to another available operational
9 context.

10
11 25. The set-top box according to claim 24, wherein the current operational
12 context comprises a shortcut to services context; and wherein the user selectable
13 options provide at least the function of shifting to another available operational
14 context.

15
16 26. The set-top box according to claim 17, wherein the current operational
17 context comprises a settings & tips context; and wherein the user selectable
18 options provide at least the function of showing the user operational tips.
19
20

1 27. The set-top box according to claim 17, wherein the current operational
2 context comprises a settings & tips context; and wherein the user selectable
3 options provide at least the function of permitting the user to change operational
4 settings.

5
6 28. The set-top box according to claim 17, wherein the current operational
7 context comprises a favorites context; and wherein the user selectable options
8 provide at least the functions of choosing a group of favorites, moving to a previous
9 favorites group, moving to a next favorites group, changing favorites and adding a
10 channel to a favorites group.

11
12 29. The set-top box according to claim 17, further comprising:
13 detecting a subsequent receipt of the pop-up option palette command; and
14 upon detecting the subsequent receipt of the pop-up option palette
15 command, removing the overlaying image from the display screen.
16

1 30. A set-top box, comprising:
2 a programmed processor;
3 a memory device storing an operating system, a browser program and a
4 pop-up option palette program to operate on the programmed processor;
5 means for displaying an image on a video display, the image being
6 associated with one of a plurality of operational contexts;
7 means for receiving user commands;
8 and wherein the pop-up option palette program operates to carry out the
9 process of:
10 detecting receipt of a pop-up option palette command;
11 upon detecting receipt of the pop-up option palette command,
12 overlaying the image on the display screen with a pop-up option palette
13 displaying a plurality of selectable user options, the options having functions
14 associated with the current operational context;
15 wherein the current operational context is selected from the plurality
16 of operational contexts comprising at least a home context, a TV context, an
17 Email context, an events context, a settings & tips context, a movies context,
18 an online context, a shortcut to services context, a program guide context
19 and a favorites context;
20 wherein each of the plurality of user selectable options has a function
21 of providing help for the current operational context;

wherein if the current operational context comprises one of a home context, a program guide context, a TV context, and an Email context; then the user selectable options provide at least the functions of adding a current channel to a favorites list, printing to a printer, and providing a shortcut to services;

wherein if the current operational context comprises one of a settings & tips context and an events context; then the user selectable options provide at least the functions of providing a shortcut to services and printing to a printer;

wherein if the current operational context comprises a movies context;
then the user selectable options provide at least the functions of playing a
movie, rewinding a movie, forwarding a movie and stopping the functions of
playing, rewinding and forwarding;

wherein if the current operational context comprises an online context; then the user selectable options provide at least the functions of adding a page to a favorites list and initiating a keyword search;

wherein if the current operational context comprises a shortcut to services context; then user selectable options provide at least the function of shifting to another available operational context;

wherein if the current operational context comprises a shortcut to services context; then the user selectable options provide at least the function of shifting to another available operational context;

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1 wherein if the current operational context comprises a settings & tips
2 context; then the user selectable options provide at least the functions of
3 showing the user operational tips and permitting the user to change
4 operational settings; and

5 wherein if the current operational context comprises a favorites
6 context; then the user selectable options provide at least the functions of
7 choosing a group of favorites, moving to a previous favorites group, moving
8 to a next favorites group, changing favorites and adding a channel to a
9 favorites group;

10 detecting a subsequent receipt of the pop-up option palette command; and
11 upon detecting the subsequent receipt of the pop-up option palette
12 command, removing the overlaying the image from the display screen.
13

1 **ABSTRACT OF THE DISCLOSURE UNDER 37 C.F.R. §1.72(b)**

2

3 A pop-up option palette for controlling electronic equipment such as a set

4 top box. The pop-up option palette of the present invention is implemented as an

5 overlay window enabled by HTML. The pop-up option palette appears anywhere

6 on the system at the touch of a particular key on the remote control and disappears

7 at the touch of the same key in the preferred embodiment. The pop-up option

8 palette provides shortcut methods for jumping to other areas of the system,

9 eliminating the need for actual toolbars or menus. When the pop-up key is

10 activated, a window providing a palette of options appears overlaying the browser's

11 main window. The content of the window can be determined based on the page

12 being displayed so that appropriate information relevant to the page being

13 displayed appears within the pop-up option palette window. Thus, the options

14 available on the pop-up option palette are context sensitive. Additionally, help

15 available through the help button is also context sensitive.

16

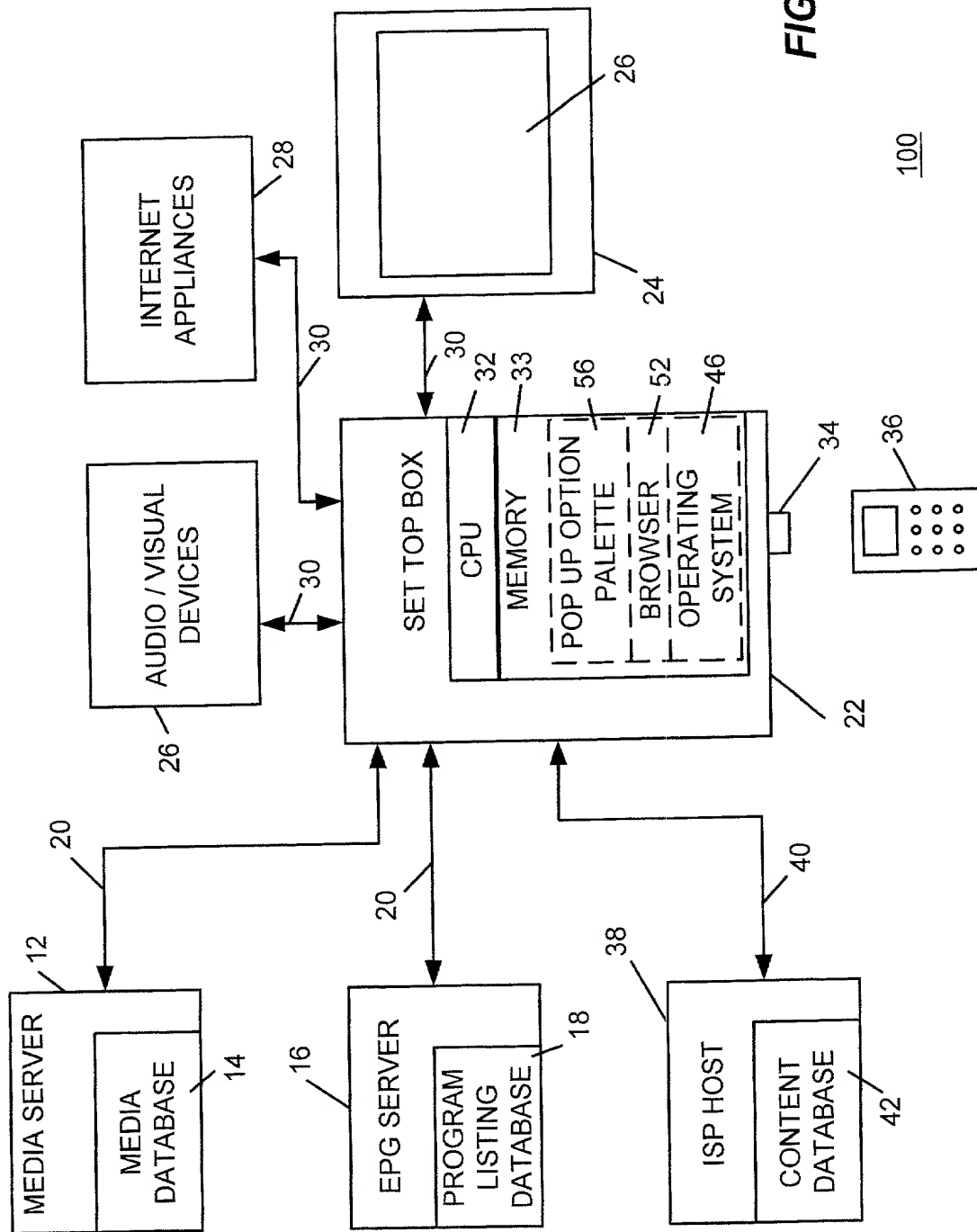


FIG. 1

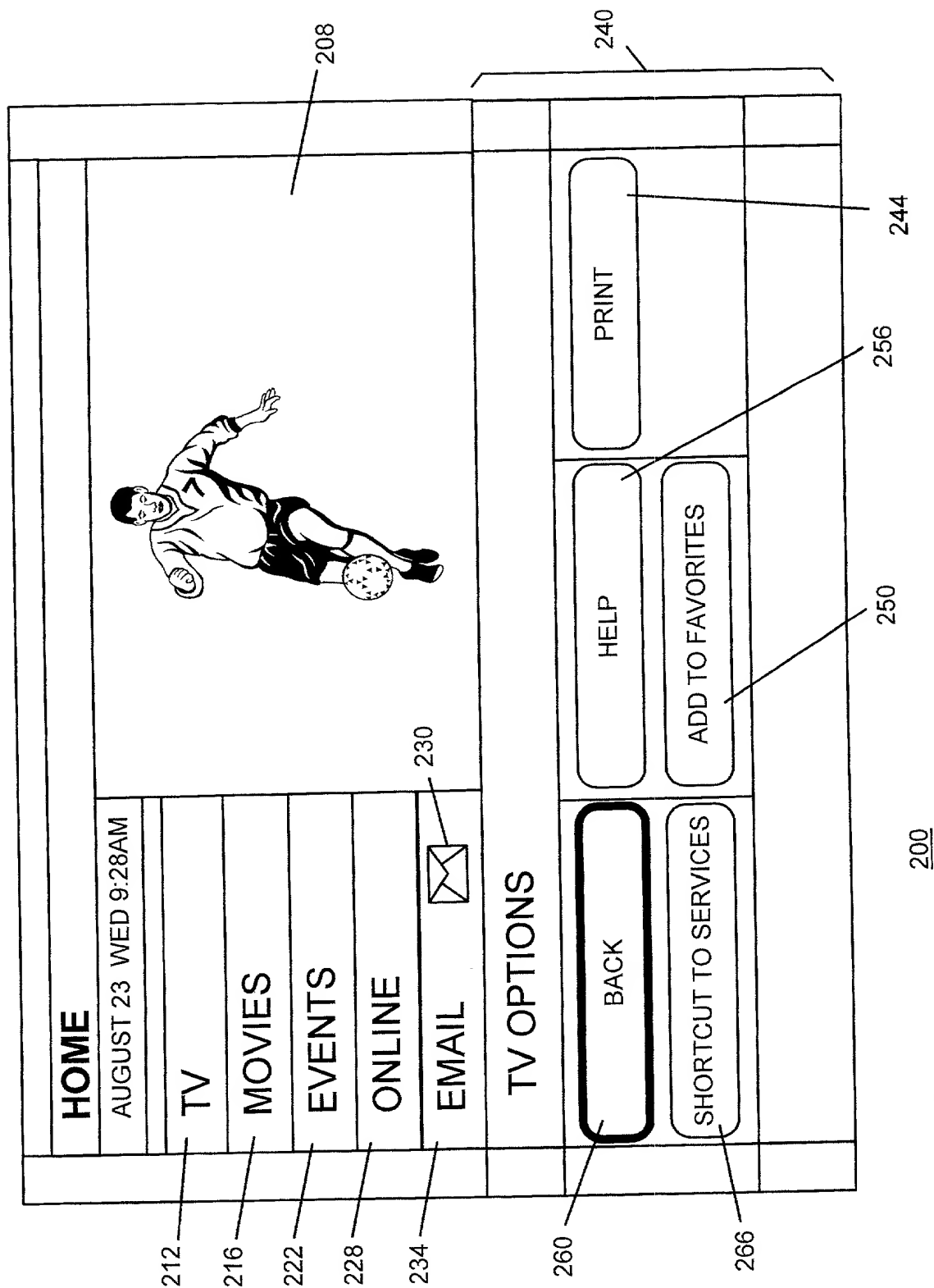


FIG. 2

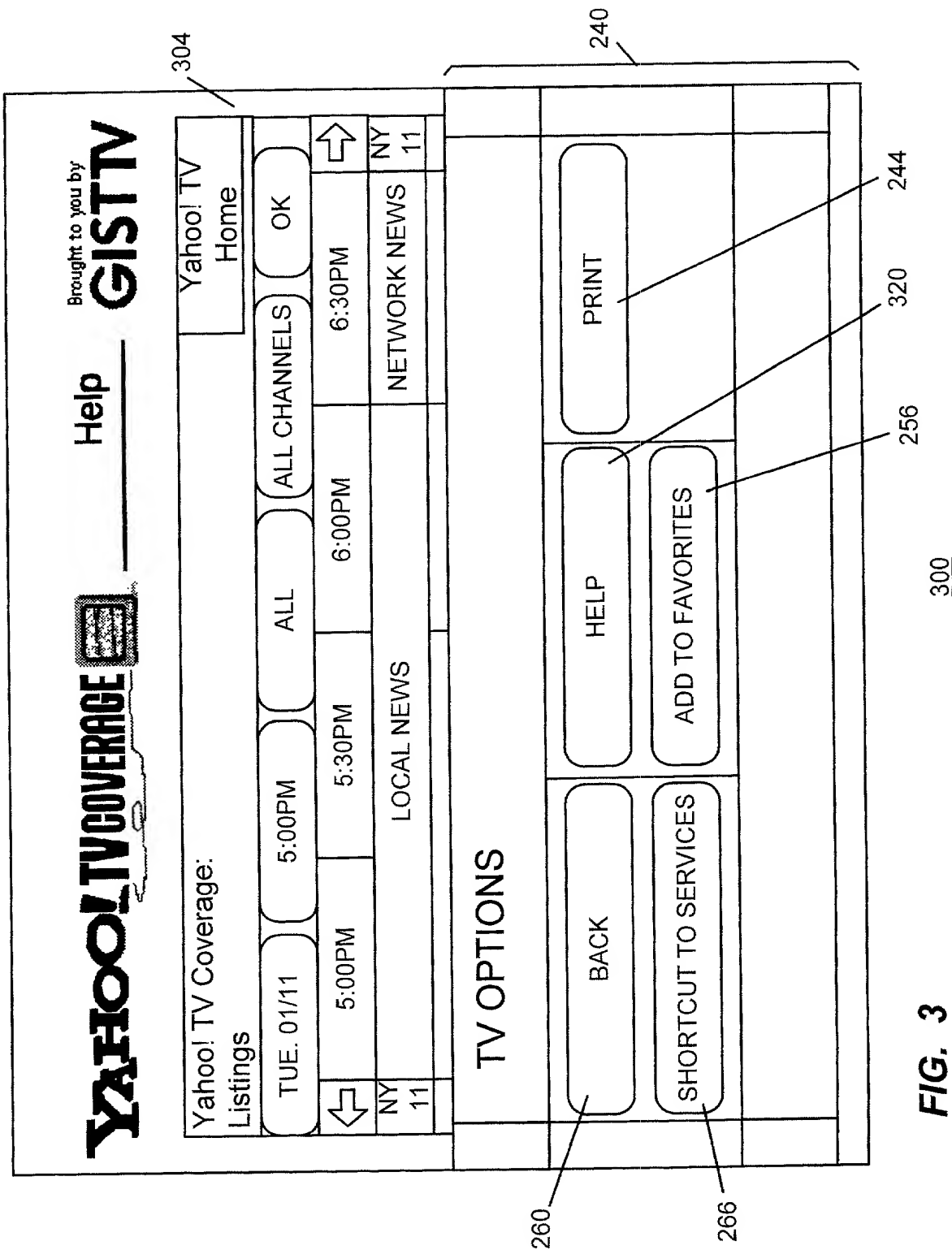


FIG. 3

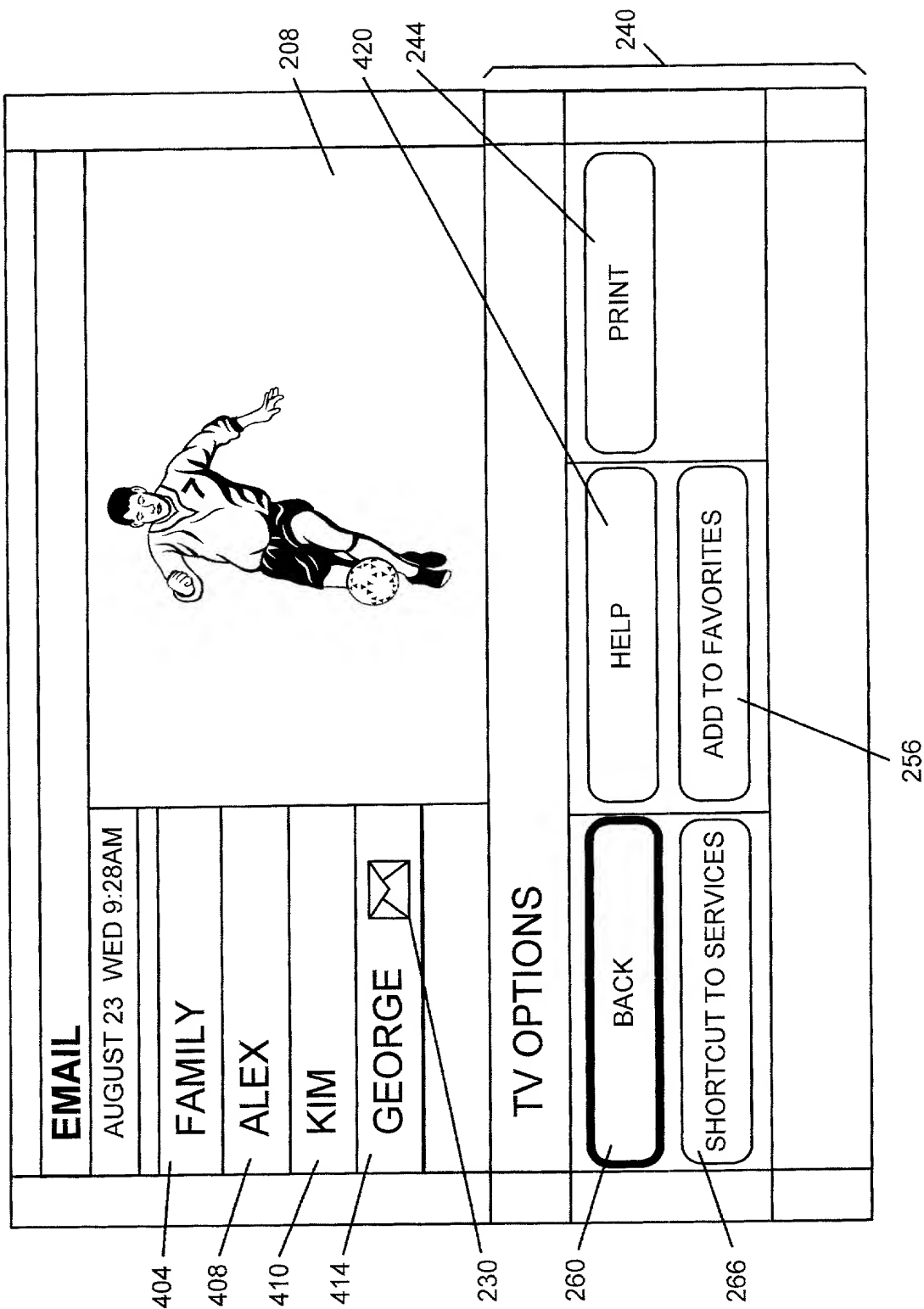


FIG. 4

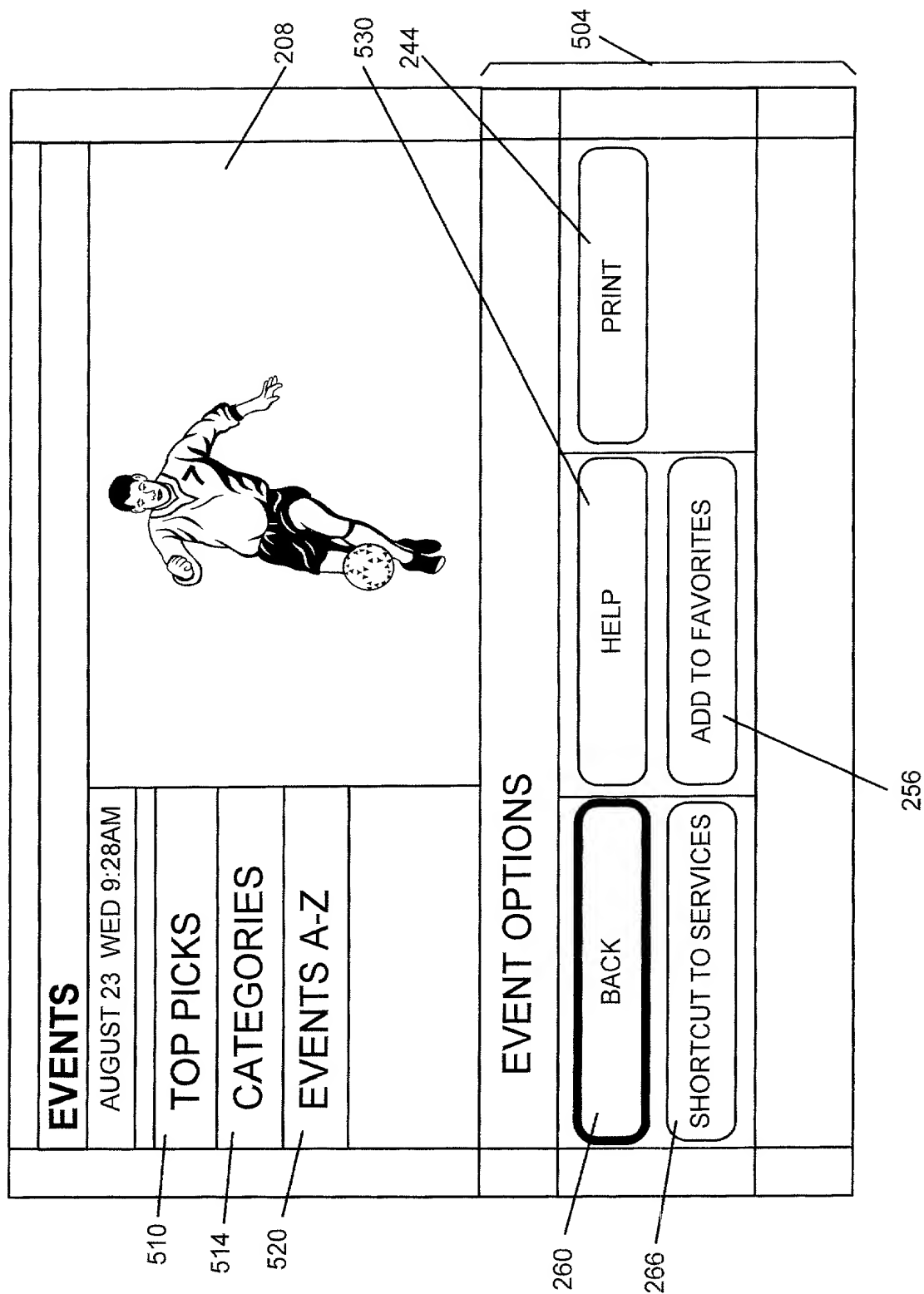


FIG. 5

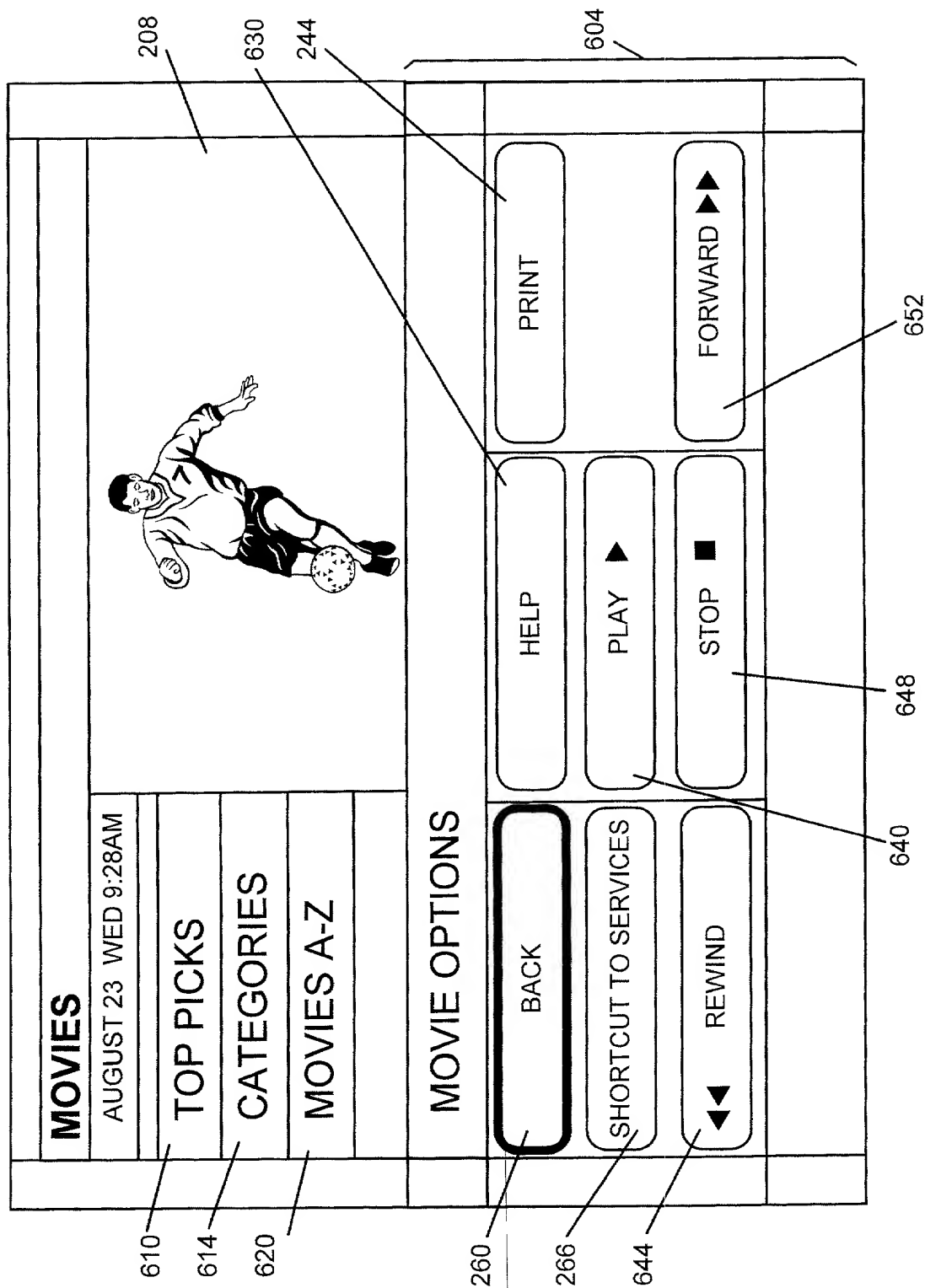


FIG. 6

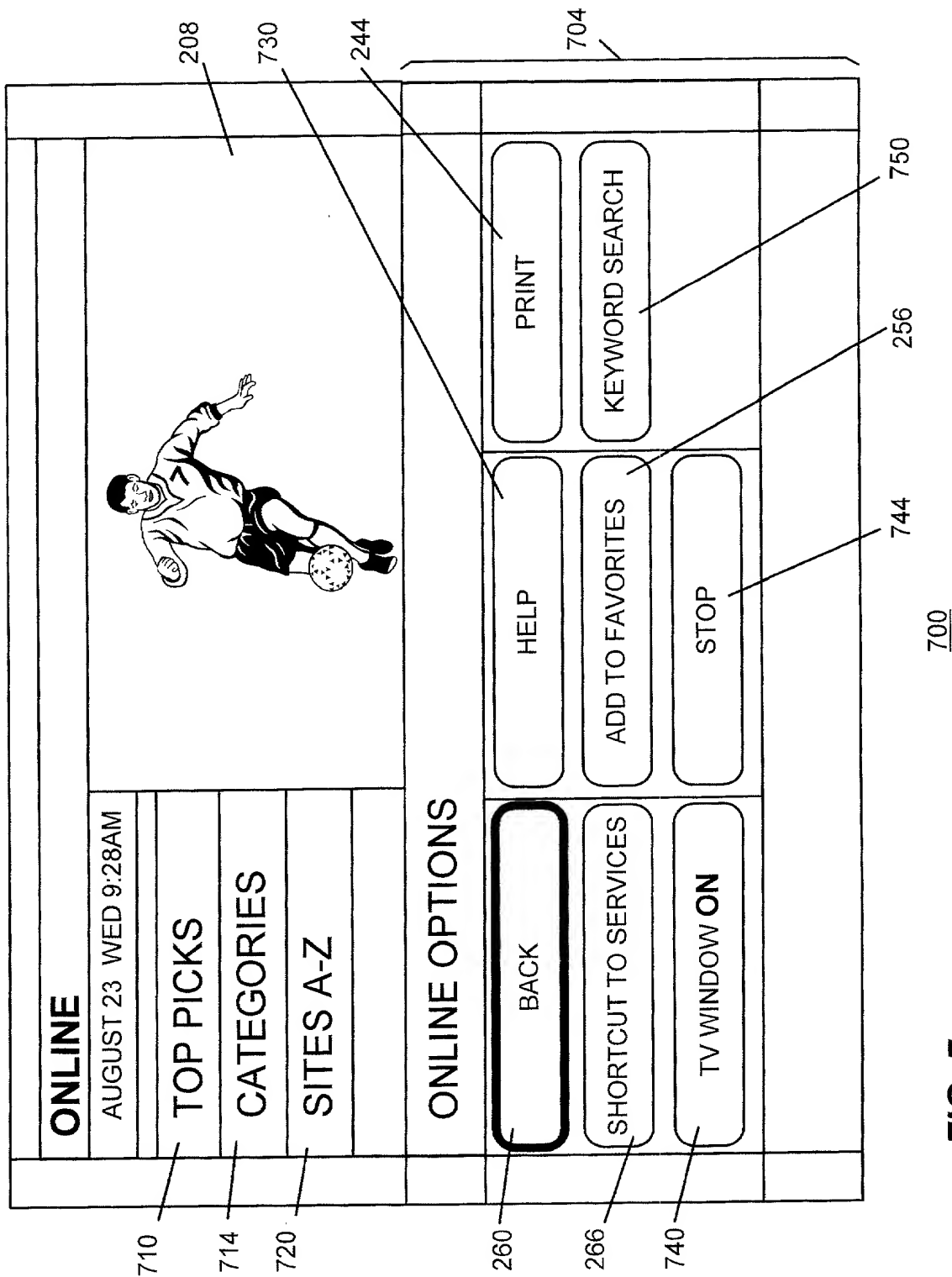


FIG. 7

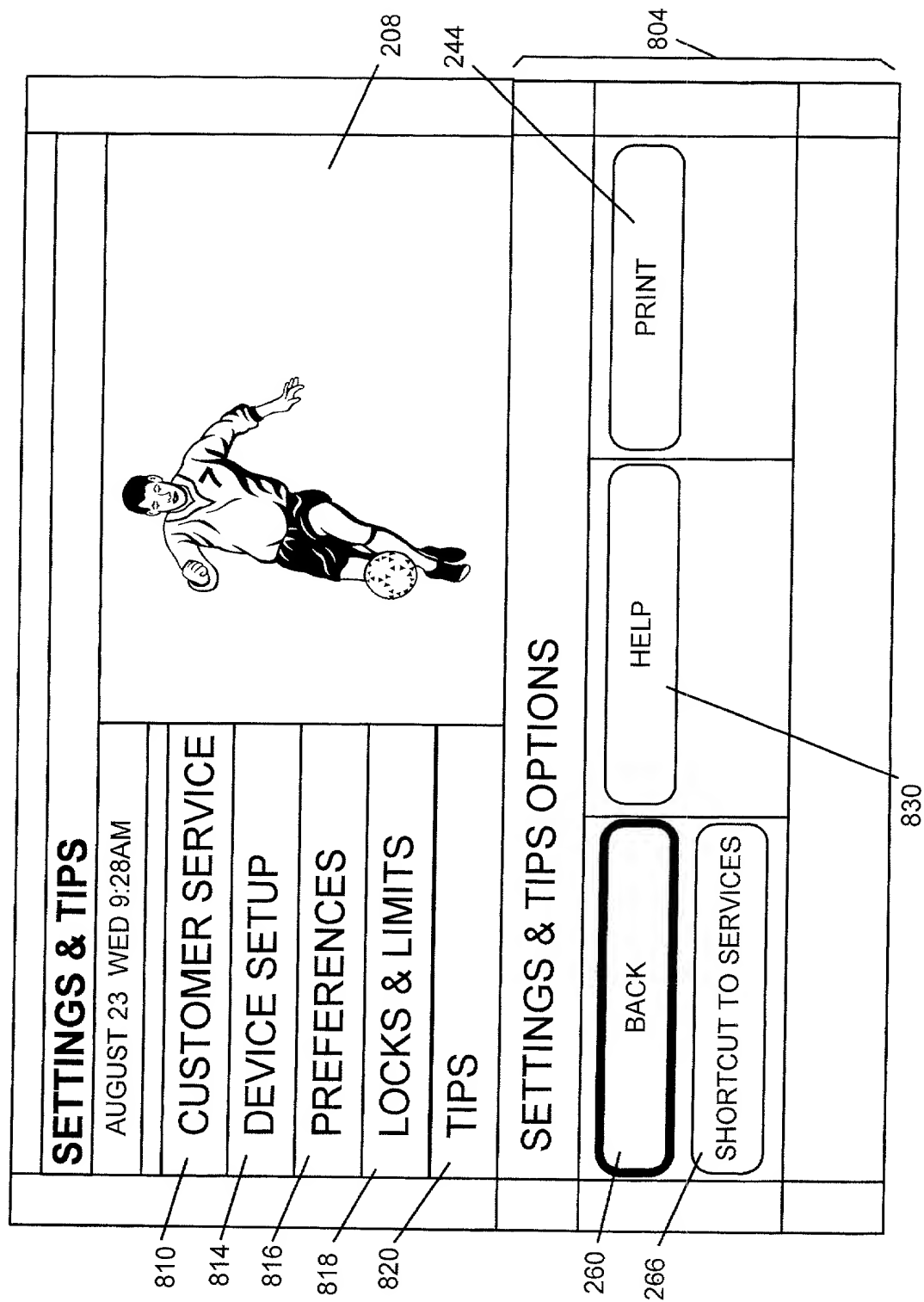


FIG. 8

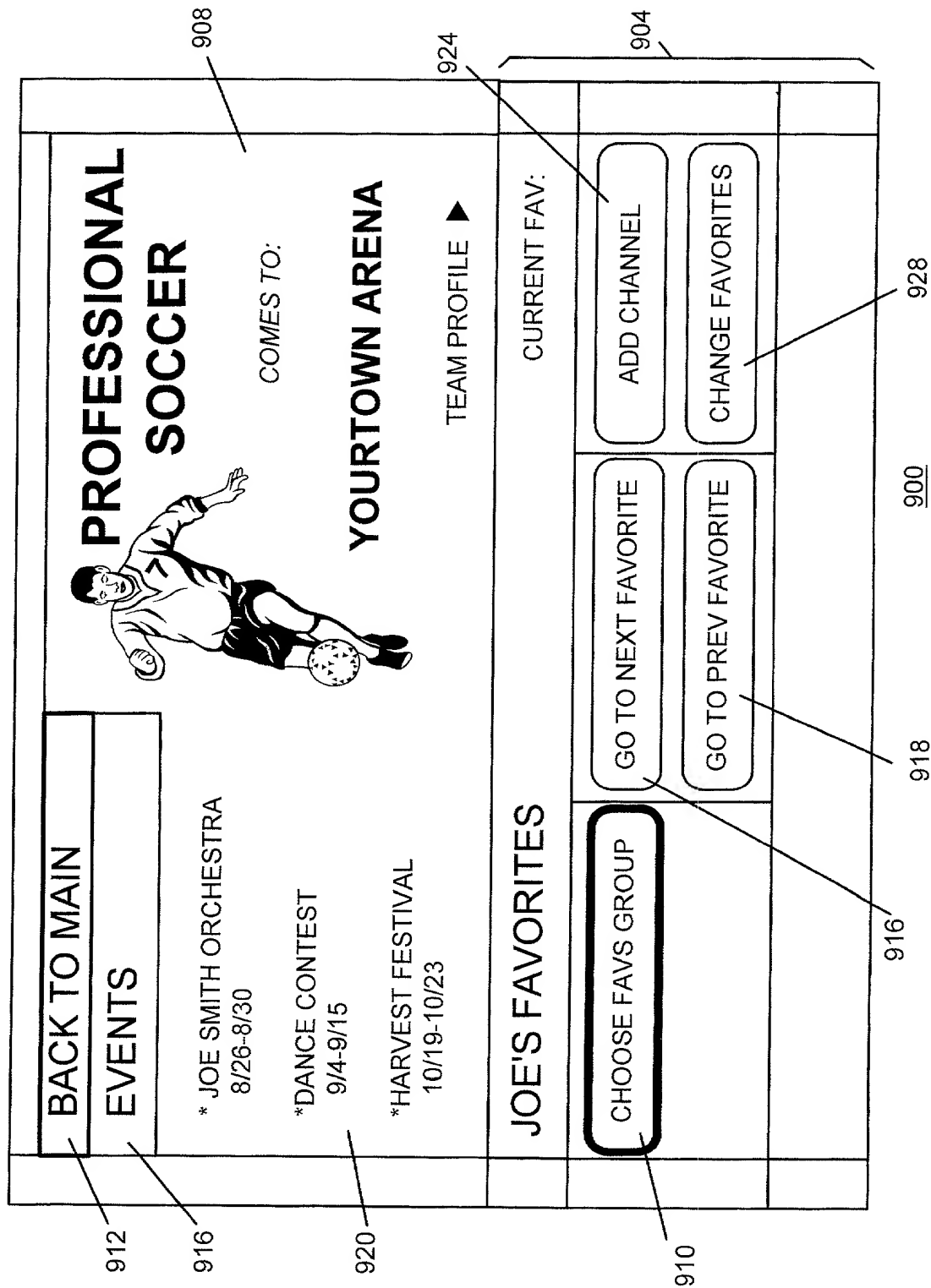


FIG. 9

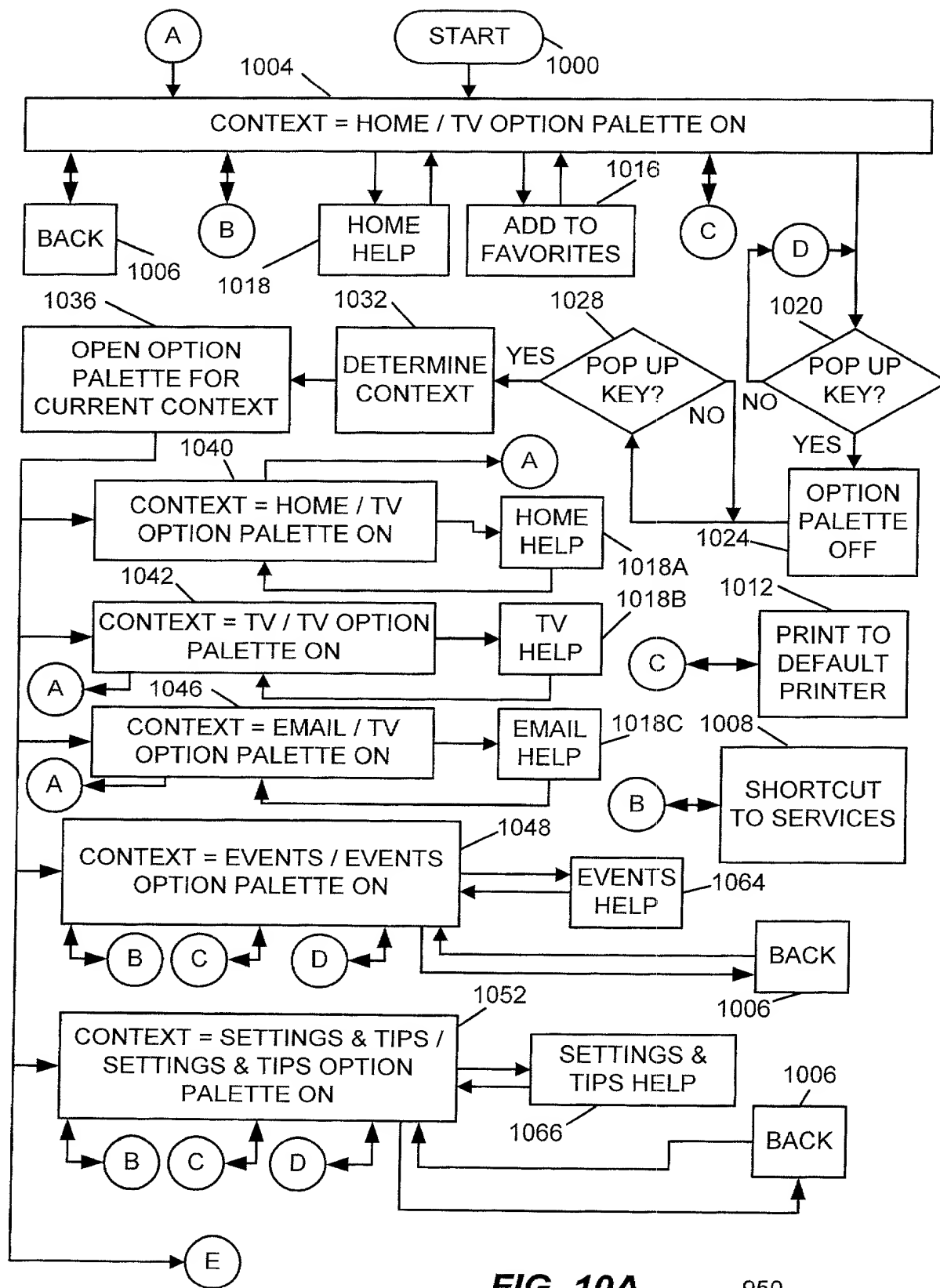
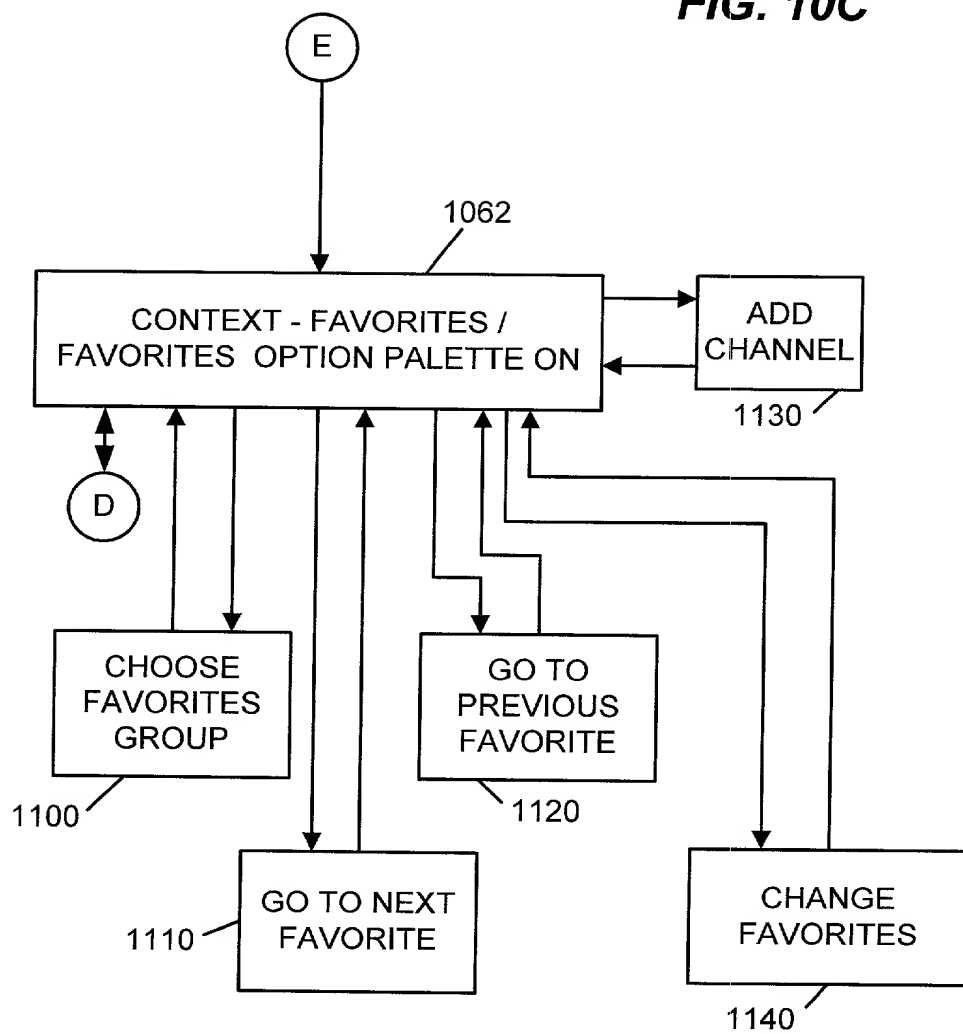


FIG. 10A

FIG. 10B

FIG. 10C



PATENT APPLICATION

DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION

ATTORNEY DOCKET NO. SNY-P4033

As a below named inventor, I hereby declare that:

My residence/post office address and citizenship are as stated below next to my name;

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

POP-UP Option Palette

the specification of which is attached hereto unless the following box is checked:

☐ was filed on _____ as US Application Serial No. or PCT International Application
Number _____ and was amended on _____ (if applicable).

I hereby state that I have reviewed and understood the contents of the above-identified specification, including the claims, as amended by any amendment(s) referred to above. I acknowledge the duty to disclose all information which is material to patentability as defined in 37 CFR 1.56.

Foreign Application(s) and/or Claim of Foreign Priority

I hereby claim foreign priority benefits under Title 35, United States Code Section 119 of any foreign application(s) for patent or inventor(s) certificate listed below and have also identified below any foreign application for patent or inventor(s) certificate having a filing date before that of the application on which priority is claimed:

COUNTRY	APPLICATION NUMBER	DATE FILED	PRIORITY CLAIMED UNDER 35 U.S.C. 119
			YES: _____ NO: _____
			YES: _____ NO: _____

Provisional Application

I hereby claim the benefit under Title 35, United States Code Section 119(e) of any United States provisional application(s) listed below:

APPLICATION SERIAL NUMBER	FILING DATE

U.S. Priority Claim

I hereby claim the benefit under Title 35, United States Code, Section 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code Section 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, Section 1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

APPLICATION SERIAL NUMBER	FILING DATE	STATUS(patented/pending/abandoned)

POWER OF ATTORNEY:

As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) listed below to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

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PATENT TRADEMARK OFFICE

Direct Telephone Calls To:

Jerry A. Miller
(973) 728-2760

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

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Date _____

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Citizenship: _____

Residence: _____

Post Office Address: _____

Inventor's Signature _____

Date _____

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Post Office Address: _____

Inventor's Signature _____

Date _____

Full Name of Inventor: _____

Citizenship: _____

Residence: _____

Post Office Address: _____

Inventor's Signature _____

Date _____